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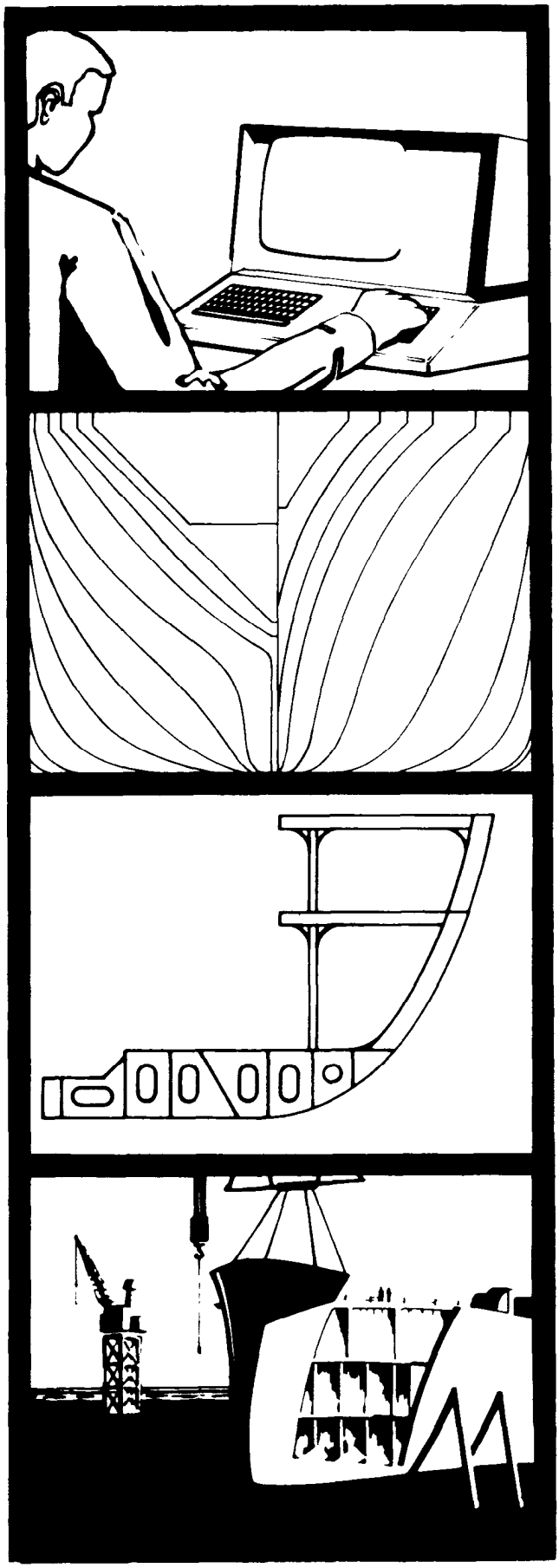

R ESEARCH
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IN
S HIPBUILDING

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QC CIRCLES FOR IMPROVING QUALITY AND PRODUCTIVITY

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ABSTRACT

In 1962, the first Quality Control Circle was launched in Japan under the auspices of the Japanese Union of Scientists and Engineers (JUSE). Today it is estimated that one worker out of six in Japanese Industry participates in a QC Circle. The foremost authority in the world on Quality Control, Dr. Joe Juran, estimates that in the first 10 years of the QC Circles movement, the Japanese industry saved an estimated $25 billion. The figure today would be over a $100 billion.

The dollar figures and improvement in quality, however, are only the most visible aspects of what has happened in Japan. The heart of the QC Circle program is a highly trained workforce engaged in identifying and implementing opportunities for improving their own immediate working situation, and the product which they make or service which they provide. This comes about in small groups or Circles of workers which have volunteered to be trained in QC Circle techniques. These Circles select and work on problems or opportunities for improvement, and then with management approval implement them. These small groups of 5 to 10 workers are normal work groups and usually include the supervisor or foreman (who is also a volunteer).

QC Circles as it exists in Japan and as it is evolving in the United States, and other countries around the world, is not another management program. It is a means of changing the focus of an organization from using people to build products or provide services to the opposite; using the problems and opportunities associated with making products or providing services to build people. This focus on building people is the key to its success. And it is successful. In the U.S. over 70 major firms which read like a corporate "Who's Who" have launched successful QC Circle activities since 1972. Once launched by a firm, these QC Circle activities have expanded to other plants.

In Japan, QC Circles are found in every major part in industry and commerce. In the U.S., the involvement has started in the electronics, aerospace and automobile industries and is rapidly expanding to other sectors of the economy. The U.S. shipbuilding and repairing industry is a relative newcomer in the use of QC Circles. Norfolk Naval Shipyard launched the first program in this industry about a year and a half ago. More recently Charleston and Long Beach Naval Shipyards have initiated QC Circle activities.

QC Circles - improving Quality and Productivity by Building People.

1. IntroductIon - Review of topics to be covered and not covered.

2. Definitions and Brief Hlstory
   a) QC Circle
   b) Technique and Philosophy
   c) U.S. lnvention - Japanese Development

3. management Phllosophy and Organlzationl Characteristics
   a) People Building - Solving of problems and achievement of objectives is used to build people rather than using people to solve problems.
   b) Trust Based - Decisions to participate, to support, and to project projects.
   c) Voluntary
   d) Open Communication - Freedom from fear of punishment regarding bad news; All relevant information available and access to sources.
   e) Supportive and committed management - willing to change itself and support others in the process.
   f) Patience - Big nave vs. Tide
   g) Training and Development Orientation - Technical, behavioral and economic with line managers assuming primary role in training.
   h) Focused results - tangible and intangible, to provide feedback for learning.
   1) Policies and Procedures encourage collaboration and cooperation - Organizational structure, reward system.
   J) Management and Union share responsibility

4. Why Choose QC Circles as an approach?

   a) Provides basis for delegating down and problem solving up.
   b) Generates measurable and organizationally important results - quality and productivity.
   c) Requires no radical changes in organizational structure or policies at beginning
   d) Has the support of growing body of union leadership.
   e) Excellent basic building block for long range shift in management style and philosophy.
   f) Creates long term needs for more sophisticated training; more career planning and developments ; smaller support staffs; flatter organizations.

5. Implementat!on of a QC Circles effort.

   a) lop level commitment to philosophy and decision to proceed.
   b) Established of Advisory or Steering Committee
   c) Selection of Facilitator (s)
   d) Orientation and training of middle management and union leadership
   e) Top-down volunteering process to determlne where to launch pilot Circles.
   f) Train supervlsors, Facilitators and others who volunteer to lead or be involved with Circles.

g) Circle leaders train Clrcle member volunteers.
h) Circles work on projects of their own selection
1) Review pilot phase.
J) Expand in an orderly fashion.

6. Videotape presentation - “Quality Circles Case Study”

7. Question and Answer Session

8. Topics I will not cover in presentation but which can be covered in Q 6 A session. If there is interest.

a Differences between Japanese and U.S. Cultures and implication.
b) Results of Circle programs in various companies (except for videotape)
c) Failures and their causes
d) Factors of timlng and organizational readiness.
e) Compatibility of QC Circles and other programs.
f) QC Circles training techniques
9) Union-Management relationships
h) Review of current literature.

QC Circle implementation - People Building vs. Problem Solving Approaches

There is a question typically raised by managers which goes something like this "Couldn't we use the QC Circle techniques in the Task Forces which we have (or will) set-up? Wouldn't this be an effective way to launch QC Circles in our firm?"

The answer to the first question is "Yes, the techniques can be effectively used by any group of people who are focused on solving a common problem".

The answer to the second question which is some times implled and not clearly stated is "No". And the reasoning needs to be made clear as to why.

Task forces and comrnittees are aImost always set-up to solve or work on specific problems or issues. The primary objective of the task force or committee is, by its very nature, the solution of the problem. Other aspects of committee or task force membershlp take a secondary role. Reference to the accompanying chart, "People Building vs. Problem Solving: A comparison of QC Circles with Task Forces and Committees '' clearly indicates this and the other differences between task force and work group focused teams (QC Circles).

With QC Circles, the primary objective is the development of the individuals In the Circle including the leader. This is accomplished by traln-Ing and working on tasks, but that does not detract from its primary emphasis. When the primary objective is the development of people, training and working on tasks should occur in the group where long term relationships are established to provide the necessarv support, help and encouragement.

It is particularly important that these relationships include the supervisor of the group. The reason for this is that the supervisor needs opportunities to learn new ways of being a leader, to shift from the typical task/production oriented approach to a participative/people building approach. in the QC Circle the leader gets imrnediate feedback on his or her own development along these lines.

From this perspective it can be seen that an effective QC Circles program needs to be "anchored" in the organizational structure in normal work groups. These groups may on occasion include individuals with different functional supervisors, but the key to membership in a Circle is a long term working relationship among the Circle members involved in doing a common task or tasks.

Circle members "live" as well as work together in their organizational setting and much of their development relates to improving their relationships by mutual support, help and encouragement. The development in both the areas of relationships and task performance are critical. Neither can be accomplished effectively without the other.

Therefore, in launching a QC Circles program focus it on normal work groups. Leave the expansion of QC Circle technique utilization in Task Forces or Committiees until later when the program is solidly anchored in the organization.

PEOPLE BUILDING VS. PROBLEM SOLVING

A Comparison of QC Circles with Task Forces and Committees

	QC CIRCLE;	TASK FORCE OR COMMITTEE
Primary Objective	Build Circle members .	Solve problem or l achieve objective
Participant Selection	Voluntary, both in and out	Usually appointed for term or until project completed
Participant Representation	Usually from same work group	From selected functional areas
Participant involvement	work together full time in addition to Circle meetings	Limited to task force or committee meetings
Leadership	Normal work group supervisor	Leader usually appointed
Skill Level and Training	Ski11s vary. Training occurs periodically.	Usually highly skilled. No Training.
Project or Goal Selection	Circle members select projects	Problem or objective selected by managemnt
lmplementation of Recommendations	Carried out by Circle members with management approval	Usually carried out by others
Termination	Ongoing	With completion of project or term